AMENDMENTS TO THE CLAIMS

Please cancel Claims 1-25 and add the following claims.

26. (Currently Amended) ~~A DNA~~ An isolated DNA which encodes a protein having transglutaminase activity, wherein the amino acid sequence of the protein comprises the serine residue at the second position to proline residue at the 331st position of the amino acid sequence of SEQ ID NO: 1, wherein the N-terminal amino acid of the protein is the serine residue at the second position of SEQ ID NO: 1.

27. (Previously Presented) The DNA of Claim 26, wherein the amino acid sequence of the protein consists of the serine residue at the second position to proline residue at the 331st position of the amino acid sequence of SEQ ID NO: 1.

28. (Currently Amended) The DNA of Claim 26, wherein the base sequence encoding ~~for~~ Arg at the forth position from the N-terminal amino acid is CGT or CGC, and the base sequence encoding for Val at the fifth position from the N-terminal amino acid is GTT or GTA.

29. (Currently Amended) The DNA of Claim 28, wherein the base sequence encoding ~~for~~ from the N-terminal amino acid to the fifth amino acid, Ser-Asp-Asp-Arg-Val (SEQ ID NO: 60), has the following sequence:

Ser: TCT or TCC,

Asp: GAC or GAT,

Asp: GAC or GAT,

Arg: CGT or CGC, and

Val: GTT or GTA.

30. (Currently Amended) The DNA of Claim 29, wherein the base sequence encoding ~~for~~ an amino acid sequence of from the N-terminal amino acid (serine) to the fifth amino acid,

Ser-Asp-Asp-Arg-Val (SEQ ID NO: 60), has the sequence TCT-GAC-GAT-CGT-GTT (SEQ ID NO: 61).

31. (Currently Amended) The DNA of Claim 29, wherein the base sequence encoding ~~for~~ an amino acid sequence of from the sixth amino acid to the ninth amino acid from the N-terminal amino acid (serine), Thr-Pro-Pro-Ala (SEQ ID NO:1, residues 7-10), has the following sequence:

Thr: ACT or ACC,

Pro: CCA or CCG,

Pro: CCA or CCG, and

Ala: GCT or GCA.

32. (Currently Amended) The DNA of Claim 30, wherein the base sequence encoding ~~for~~ an amino acid sequence of from the sixth amino acid to the ninth amino acid from the N-terminal amino acid (serine), Thr-Pro-Pro-Ala (SEQ ID NO:1, residues 7-10), has the following sequence:

Thr: ACT or ACC,

Pro: CCA or CCG,

Pro: CCA or CCG, and

Ala: GCT or GCA.

33. (Currently Amended) ~~A DNA~~ An isolated DNA comprising a nucleotide sequence ranging from the thymine base at the fourth position to the guanine base at the 993rd position of the nucleotide sequence of SEQ ID NO: 2.

34. (Currently Amended) ~~A DNA~~ An isolated DNA consisting of a nucleotide sequence ranging from the thymine base at the fourth position to the guanine base at the 993rd position of the nucleotide sequence of SEQ ID NO: 2.

35. (Previously Presented) A recombinant DNA comprising the DNA of Claim 26.

36. (Previously Presented) A recombinant DNA having a DNA of Claim 28.

37. (Previously Presented) A recombinant DNA having a DNA of Claim 29.

38. (Previously Presented) The recombinant DNA of Claim 35, further comprising a promoter selected from the group consisting of trp, tac, lac, trc, λPL and T7.

39. (Previously Presented) The recombinant DNA of Claim 36, further comprising a promoter selected from the group consisting of trp, tac, lac, trc, λPL and T7.

40. (Previously Presented) The recombinant DNA of Claim 37, further comprising a promoter selected from the group consisting of trp, tac, lac, trc, λPL and T7.

41. (Previously Presented) A procaryotic microorganism transformed with the recombinant DNA of Claim 35.

42. (Previously Presented) The transformed procaryotic microorganism of Claim 41, which is *Escherichia coli*.

43. (Previously Presented) The transformed *Escherichia coli* of Claim 42, which is transformed with a multi-copy vector.

44. (Previously Presented) The transformed *Escherichia coli* of Claim 42, wherein the *Escherichia coli* is the JM109 strain.

45. (Previously Presented) A process for producing a protein having a transglutaminase activity, comprising culturing the transformed procaryotic microorganism of Claim 41 in a medium to produce the protein having the transglutaminase activity, and recovering the protein.

46. (Previously Presented) A process for producing a protein having a transglutaminase activity, comprising culturing the transformed *Escherichia coli* of Claim 42 in a medium to produce the protein having the transglutaminase activity, and recovering the protein.

47. (Previously Presented) A process for producing a protein having a transglutaminase activity, comprising culturing the transformed *Escherichia coli* of Claim 43 in a medium to produce the protein having the transglutaminase activity, and recovering the protein.

48. (Previously Presented) A process for producing a protein having a transglutaminase activity, comprising culturing the transformed *Escherichia coli* of Claim 44 in a medium to produce the protein having the transglutaminase activity, and recovering the protein.

49. (Currently Amended) ~~A DNA~~ An isolated DNA which codes for a protein having transglutaminase activity and comprising an amino acid sequence represented by ~~SEQ ID No. 1~~ SEQ ID No: 1, wherein the base sequence coding for Arg at the fifth position from the N-terminal amino acid (aspartic acid) is CGT or CGC, and the base sequence ~~coding for~~ encoding Val at the sixth position from the N-terminal amino acid is GTT or GTA.

50. (Currently Amended) The DNA of claim 49, wherein the base sequence ~~coding for~~ encoding an amino acid sequence of from the second amino acid to the sixth amino acid from the N-terminal amino acid (aspartic acid), Ser-Asp-Asp-Arg-Val (SEQ ID NO:1, residues 2-6), has the following sequence:

Ser: TCT or TCC

Asp: GAC or GAT

Asp: GAC or GAT

Arg: CGT or GCG

Val: GTT or GTA.

51. (Currently Amended) The DNA of claim 49, wherein the base sequence ~~coding for~~ encoding an amino acid sequence of from the second amino acid to the sixth amino acid from the N-terminal amino acid (aspartic acid), Ser-Asp-Asp-Arg-Val (SEQ ID NO:1, residues 2-6), has the sequence TCT-GAC-GAT-CGT-GTT (SEQ ID NO:2, bases 4-18).

52. (Currently Amended) The DNA of claim 50, wherein the base sequence ~~coding for~~ encoding an amino acid sequence of from the seventh amino acid to the tenth amino acid from the N-terminal amino acid (aspartic acid), Thr-Pro-Pro-Ala (SEQ ID NO:1, ~~residues 4-7~~ residues 7-10), has the following sequence:

Thr: ACT or ACC

Pro: CCA or CCG

Pro: CCA or CCG

Ala: GCT or GCA.

53. (Currently Amended) The DNA of claim 51, wherein the base sequence ~~coding for~~ encoding an amino acid sequence of from the seventh amino acid to the tenth amino acid from the N-terminal amino acid (aspartic acid), Thr-Pro-Pro-Ala (SEQ ID NO:1, ~~residues 4-7~~ residues 7-10), has the following sequence:

Thr: ACT or ACC

Pro: CCA or CCG

Pro: CCA or CCG

Ala: GCT or GCA.

SUPPORT FOR THE AMENDMENTS

Claims 1-25 were previously canceled.

Claims 26, 28-34, and 49-53 are currently amended.

The amendment of Claims 26, 28-34, and 49-53 is supported by the specification at pages 5-63 and by Claims 1-25 as originally filed. Claims 49-53 are supported by original Claims 5-8, except that the N-terminal amino acid is Asp. This is supported by SEQ ID NO: 1 of the present application where Asp is the first amino acid. Claims 26 and 28-34 are supported by the original Claims 1-8 and the Sequence Listing (in particular SEQ ID NO: 1) as originally filed.

No new matter has been added to this application by the present amendments.